

CLAIMS

1. A sealing device comprising a plurality of L-shaped seals, one round surface and the other flat surface being contacted on outer sidewall of the powered rotary cylinder and on outer sidewall of the shell respectively at the intersection, one L-shaped seal being crossed into another L-shaped seal on the sides, the L-shaped seal with a hole on the flat surface being fitted by a slide on the fixed shell, and the seals crossed freely on these three-dimensional sealing surfaces being arranged in a circumferential direction of the cylinder.
2. A sealing device according to claim 1, in which the L-shaped seal has a ditch for presence of sealing material on the sealing surface.
3. A sealing device according to claim 1 and 2, in which the L-shaped seal has measures for tension at cross sections.
4. A sealing device according to claim 1, 2 and 3, in which:
 - the L-shaped seal has one round surface and the other flat surface contacted on outer sidewall of the powered rotary cylinder and on outer sidewall of the fixed shell respectively at the intersection;
 - one end of both surfaces of the L-shaped seal is concavo and the other end is convex, and the concavo of one L-shaped seal and the convex of another L-shaped seal are crossed lengthwise and widthwise;
 - the L-shaped seal with a hole on the flat surface is fitted by a slide on the fixed shell; and

the L-shaped seals crossed on these three-dimensional sealing surfaces are always arranged tightly, especially lengthwise in a circumferential direction of the cylinder.

5. A sealing device according to claim 1, 2, 3, and 4, in which:

both ends of one round surface and the other flat surface of some L-shaped seals are concavo and both ends of one round surface and the other flat surface of other L-shaped seals are convex; and

either L-shaped seal has a hole on the flat surface.

6. A sealing device according to claim 5, in which the L-shaped seal with both convex ends doesn't have a hole on the flat surface.

7. A sealing device according to claim 1, 2, 3, 4 and 5 in which each of some L-shaped seals and other L-shaped seals has a hole and no hole respectively on the flat surface.

8. A sealing device according to claim 1, 2, 3, 4, 5, 6 and 7, in which the L-shaped seal has a ditch for presence of sealing material.

9. A sealing device according to claim 8, in which the L-shaped seal has a sealing material-pressing out gadget over the ditch.

10. A sealing device according to claim 1, 2, 3, 4, 5, 6, 7, 8 and 9, in which the L-shaped seals have spring, weights or both spring and weights as measures for tension at cross sections.

11. A sealing device according to claim 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10, in which the L-shaped seals have oil-caps, grease-nipples or both of them.

12. A sealing device according to claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11,in which the L-shaped seal has a ditch for presence of oil on the sealing surface.